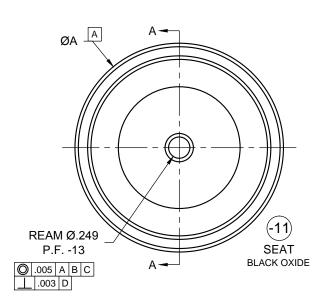


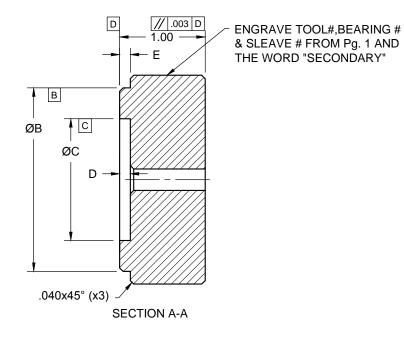
TOOL # KST-BACB10CH	ØA +.000 002	B +.010 010	PIN TYPE	QTY		MATERIA	L
KSTCH40-SL	.248	.676	1	2	1018	RND. BAR	Ø5/16 x 7/8
KSTCH50-SL	.309	.676	III	2	1018	RND. BAR	Ø3/8 x 7/8

NOTES

1. BREAK ALL SHARP CORNERS (.015/.03).

	rb R	ED	BA	4R1	1	МД	CH	ΙN	Ε	
TITLE		I##-SL IING TI								
DWG NO	TE	DL#	(se	е c	hα	rt)-	-15			REV 1
	JNLESS OTH DIMENSION				DRA	AWN BY:	PE	RRI	ГТ	
	ANCES ON:	NS ARE IN	INCHE	5	APF	PROVED				
DECIN		FRACTIC	NS + 1	/32	HEA TRE	AT				
.XX	- .01 F −1		LES ±.5		FIN SPE	ISH C	BLAC	:к <u>п</u>	XIDE	
	L . I NLESS OTHE	RWISE SE	PECIFIE	-D	1	US	SED ON B	EARIN	G	
	 BREAK AL 	L SHARP	EDGES			:	SEE P	g. 1		
2. DI	015 x 45. MENSIONAL LIM	° PR .015 I ITS APPLY AF		TING						
SCALE	NTS	<u> </u>	DATE	11-	7-	08	SHEET	9	of	9

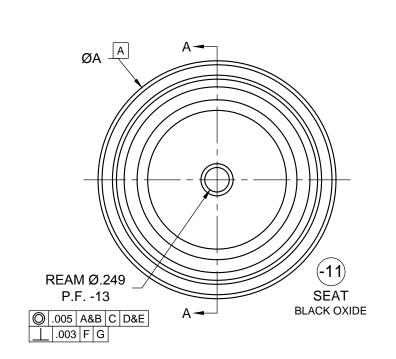


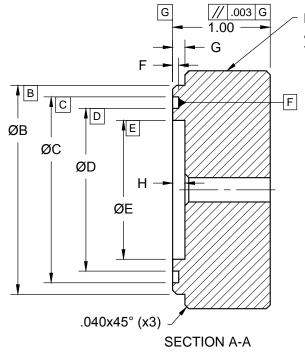


NOTES 1. BREAK ALL SHARP CORNERS (.015/.03).

TOOL # KST-BACB10CH	ØA +.020 020	ØB +.000 005	ØC +.005 000	D +.010 010	E +.020 020		MATER	RIAL
KSTCH40-SL	1.310		.688	.188	-	4140 Q&T	RND. BAR	Ø1-3/8 x 1-1/8
KSTCH50-SL	1.625	•	1.036	.188	-	4140 Q&T	RND. BAR	Ø1-3/4 x 1-1/8

	RB	RED	BA	4R1	1	MΔ	₁ CH	ΙN	Ε		
TITLE		CH##-SL AGING TI									
DWG NO		00L#	(se	e c	hαι	rt)-	-13			REV 1	
TOLER	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:						DRAWN BY: PERRITT APPROVED				
DECIN .XXX : .XX :		FRACTIC ANG	NS ± 1/ LES ±.5		HEA TREA FINI SPE	AT ISH C			XIDE		
UI	UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES					USED ON BEARING SEE Pg. 1					
.015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING											
SCALE NTS DATE 11-7-0						08	SHEET	8	of	9	



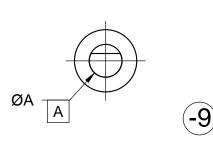


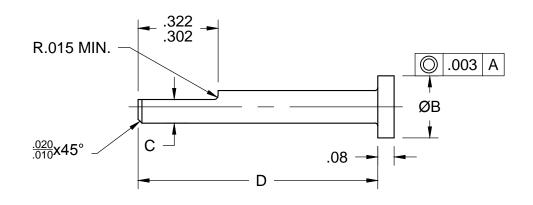
ENGRAVE TOOL#,BEARING # & SLEAVE # FROM Pg. 1 AND THE WORD "PRIMARY"

<u>NOTES</u>
1. BREAK ALL SHARP CORNERS (.015/.03).

TOOL # KST-BACB10CH	ØA +.020 020	ØB +.000 005	ØC +.005 000	ØD +.000 005	ØE +.010 010	F +.002 002	G +.020 000	H +.010 010		MATERIA	AL.
KSTCH40-SL	1.310	-	1.031	.851	.688	.028	-	.188	4140 Q&T	RND. BAR	Ø1-3/8 x 1-1/8
KSTCH50-SL	1.625	-	1.379	1.199	1.036	.048	-	.188	4140 Q&T	RND. BAR	Ø1-3/4 x 1-1/8

	RB RE	D E	3AR	Ν	MΑ	4CH	INE	-	
TITLE	KSTCH## SWAGIN								
DWG NO	· TOOL	_# (s	see (:h	ırt)	-11			REV 1
UNLESS OTHERWISE SPECIFIED DRAWN BY: PERRITT DIMENSIONS ARE IN INCHES									
TOLER	ANCES ON:	KE IN INC	HES	AF	PROVED				
.XXX =	L 005	ACTIONS ANGLES		TR FI	AT EAT NISH PEC	BLA	ск пх	IDE	
<u> </u>	NLESS OTHERW	FIED	ℸL	U	ISED ON B	EARING			
	1. BREAK ALL SH	Г		SEE P	g. 1				
.015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING									
SCALE	NTS	DATE	11-	-7-	-08	SHEET	7 c)f	9

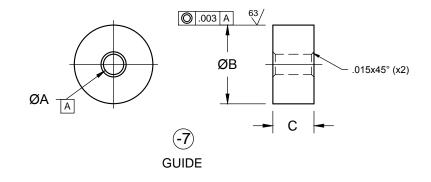




TOOL # KST-BACB10CH	ØA +.000 001	ØB +.005 002	C +.000 020	D +.020 020	MATERIAL
KSTCH40-SL	.129	.188	.104	.925	MCMASTER-CARR PN: 98378A909
KSTCH50-SL	.129	.188	.104	.925	MCMASTER-CARR PN: 98378A909

<u>NOTES</u>
1. BREAK ALL SHARP CORNERS (.015/.03).

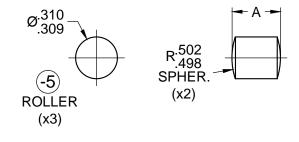
	RB F	RED	BAR	SN	Mi	4CH	INE	
TITLE		H##-SL AGING TI						
DWG NO		T00L#					DEFINITION	REV 1
ι		THERWISE S ONS ARE IN			RAWN B	· г	RRITT	
DECIN .XXX	£ .005		NS ± 1/32	Ė	PPROVE EAT REAT INISH			
.X	E .01 E .1		ES ±.5°	5	PEC	USED ON B	EARING	<u>-</u>
	1. BREAK	HERWISE SF ALL SHARP I	EDGES	E		SEE P		
		45° PR .015 F IMITS APPLY AF	TER PLATING			I		
SCALE	NT		ATE 11	-7	-08	SHEET	6 of	, 9



TOOL # KST-BACB10CH	ØA +.001 001	ØB +.000 002	C +.000 010	MATERIA	AL
KSTCH40-SL	.132	.248	.230	BRONZE RND. BAR	Ø3/8 x 3/8
KSTCH50-SL	.132	.309	.230	BRONZE RND. BAR	Ø3/8 x 3/8

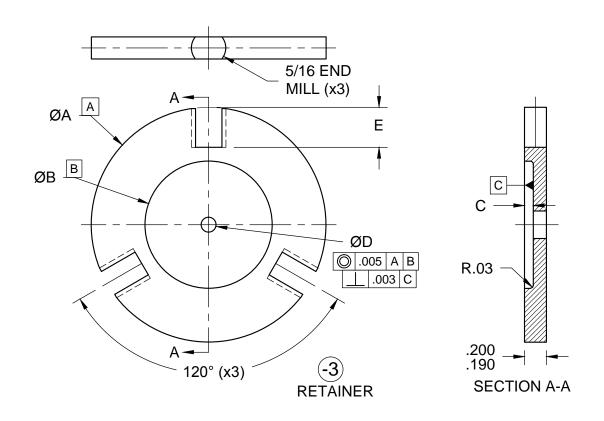
<u>NOTES</u>
1. BREAK ALL SHARP CORNERS (.015/.03).

	® RED	BARN	1 M	ACH:	INE	
TITLE	KSTCH##-SL SWAGING T					
DWG NO		: (see :				REV 1
L	INLESS OTHERWISE S DIMENSIONS ARE IN		DRAWN E	^{BY:} PE	RRITT	
	ANCES ON:	INCHES	APPROVE	ED		
DECIN	L 00F	NS ± 1/32	HEAT TREAT			
.xx		LES ±.5°	FINISH SPEC			
<u> </u>	L .1 NLESS OTHERWISE SI	PECIFIED		USED ON B	EARING	
	1. BREAK ALL SHARP	EDGES		SEE P	g. 1	
2. DII	015 x 45° PR .015. MENSIONAL LIMITS APPLY AI					
SCALE	NTS	DATE 11—	7-N8	SHEET	5 of	9



TOOL # KST-BACB10CH	+.001 001		MATERIAL	
KSTCH40-SL	.250	.310 MINUS	GAUGE PIN	MSC#89031009
KSTCH50-SL	.360	.310 MINUS	GAUGE PIN	MSC#89031009

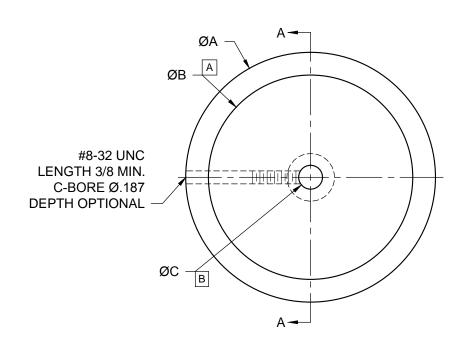
	® RED	BARI	\bigvee	МΑ	CH:	ΙN	Ε	
TITLE	KSTCH##-S	L SERIES TOOLS FOR						
		IUULO LUK	. DF	ICDIO	<u>СП##</u>	DEH	KTING	
DWG NO	TOOL	# (see	ch	art))-5			REV 1
L	INLESS OTHERWISE DIMENSIONS ARE I		DRA	WN BY:	PE	RRI	ΓT	
	ANCES ON:	IN INCHES	APP	ROVED				
DECIN .XXX	- 005	IONS ± 1/32	HEA	T AT				
.XX	01	GLES ±.5°	FINI	SH				
/\	: .1 NLESS OTHERWISE	SPECIFIED	-	US	SED ON B	EARIN	G	
	1. BREAK ALL SHAR	SEE Pg. 1						
2. DII	.015 x 45° PR .019 MENSIONAL LIMITS APPLY							
SCALE	NTS	DATE 11-	7-1	08	SHEET	4	of	9



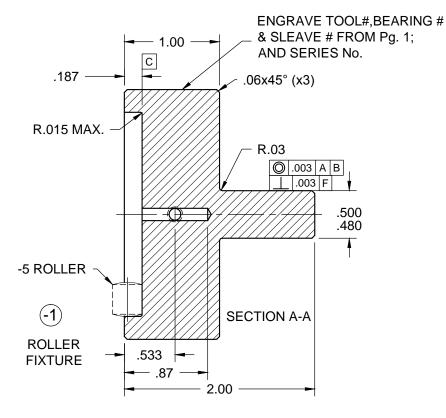
TOOL # KST-BACB10CH	ØA +.002 002	ØB +.005 005	+.005 005	ØD +.004 001	+.005 005	MATERIAL	
KSTCH40-SL	1.132	.545	.080	.136	.245	BRONZE RND. BAR	Ø1-1/4 x 3/8
KSTCH50-SL	1.591	.750	.080	.136	.365	BRONZE RND. BAR	Ø1-3/4 x 3/8

NOTES 1. BREAK ALL SHARP CORNERS (.015/.03).

	® RED	BAR	N	МΔ	CH:	IN	Ε	
TITLE	KSTCH##-S SWAGING	SL SERIES TOOLS FO						
DWG NO		# (see	cho	art)-3			REV 1
	UNLESS OTHERWIS DIMENSIONS ARE		DRA	WN BY:	PE	RRIT	Т	
	ANCES ON:	IN INCHES	APP	APPROVED				
DECII .XXX	→ 00E	TIONS ± 1/32	HEA TREA	T AT				
	1 01 FRAC	NGLES ± 1/32	FINI	SH C				
	L .1 NLESS OTHERWISE	SPECIFIED	_	US	SED ON B	EARING	3	
	1. BREAK ALL SHAR	P EDGES		SEE Pg. 1				
2. DI	01. O15 x 45° PR. IMENSIONAL LIMITS APPLI							
SCALE	2TN	DATE 11-	-7-ı	08	SHEET	3	of	9



MATERIAL



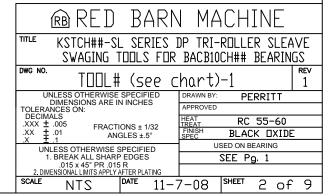
KST-BACB10CH	+.010 010	+.005 005	+.008	SLEAVE CENTER	MATERIAL				
KSTCH40-SL	1.441	1.191	.131	.941	0-1	DRILL ROD	Ø1-1/2 x 2-1/8		
KSTCH50-SL	1.900	1.649	.131	1.289	0-1	DRILL ROD	Ø2 x 2-1/8		

ØA ØB ØC ØD

TOOL#

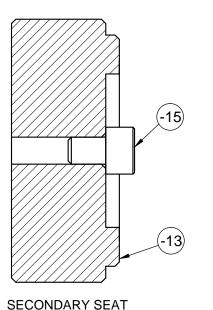
NOTES

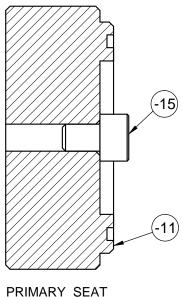
- 1. BREAK ALL SHARP CORNERS (.015/.03).
- 2. -1 BEARING RACE SUFACES MUST HAVE SMOOTH APPEARANCE, FREE FROM MACHINING MARKS AND GROOVES.
- 3. DO FIRST ARTICLE INSPECTION BEFORE HEAT TREATING.



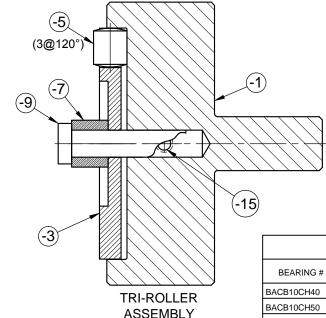
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	REVISIONS			
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	ADDED STCH40-SL TO TOOL LIST.	2/23/09	WP	
	-			





ASSEMBLY



SING

DRILL PRESS TRI-ROLLER SLEAVE SWAGING TOOL ASSEMBLY FOR BEARINGS

NOTES

1. -5 ROLLERS MUST TURN FREELY IN -3 RETAINER POCKETS.

ASSEMBLY

- 2. -5 ROLLERS & -3 RETAINER MUST TURN FREELY WHEN TOOL IS COMPLETELY ASSEMBLED.
- 3. TOOL No. ENDING WITH THE LETTERS -SL ARE USED FOR SLEAVE SWAGING ONLY.

ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	B/O INFORMATION OR SPECIFICATIONS	Pg.]'
		-1	1	ROLLER FIXTURE	SEE CHART	2	<u> </u>
		-3	1	RETAINER	SEE CHART	3]՝
		-5	3	ROLLER	SEE CHART	4	}
		-7	1	GUIDE	SEE CHART	5] ·
		-9	1	PIN	SEE CHART	6]
		-11	1	PRIMARY SEAT	SEE CHART	7	ŀ
		-13	1	SECONDARY SEAT	SEE CHART	8]
		-15	SEE CHART	LOCATING PIN	SEE CHART	9	l
	B/O	-17	1	SOCKET HEAD SET SCREW	#8-32 x 1/4	N/S]

® RED BARN MACHINE

KSTCH##-SL SERIES DP TRI-ROLLER SLEAVE SWAGING TOOLS FOR BACB10CH## BEARINGS

UNLESS OTHERWISE SPECIFIED | DRAWN BY: PERRITT

DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005 FRACTIONS ± 1/32
.XX ± .01 ANGLES ±.5°
X ± .01 ANGLES ±.5°

2 APPROVED

HEAT ISTED PER ITEM
FINISH LISTED PER ITEM
USED ON BEARING

SEE ABOVE

BEARINGS & TOOLS COVERED

> TOOL # KSTCH40-SL

KSTCH50-SL

SLEAVE #

185A4101-57

185A4101-55

UNLESS OTHERWISE SPECIFIED

1. BREAK ALL SHARP EDGES

0.015 x 45° PR .015 R

2. DIMENSIONAL LIMITS APPLY AFTER PLATING

NTS | DATE | 11-7-08 | SHEET | 1 of 9

	REVISIONS			
REV	DESCRIPTION	DATE	INITIAL	APPR
1		-	-	-

						1,			V)		® RED BARN MACHINE	
ASS QT	Y ASS Y QTY	Y B/C	PART#	UNIT		DESCRIPTION				MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.	TITLE ——	
			-1	1	RND			X		6061	Ø8-1/4 x 3-7/8	2	DWG NO	RE
						\mathcal{L}	$oldsymbol{\mathcal{X}}$						UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMAL PROVED DECIMAL PROVED	_
							\ '						DECIMALS .XXX ± .005 .XX ± .01 .X ± .01 .X + .00 OTHERWISE DECISION USED ON MODEL	
						<u> </u>							UNLESS OF HERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR.015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	_
Г	ASS	Y											$^{\text{SCALE}}$ NTS $^{\text{DATE}}$ 8–15–07 $^{\text{SHEET}}$ 1 c	f

	REVISIONS		
REV	DESCRIPTION	DATE	APPROVED

NOT APPROVED FOR PRODUCTION

			PART				DESCRIF	PTION		
			-1	ı	1					
		DRAWN BY: PERRITT			— \ Г		$D \wedge D M$	$\Lambda \Lambda \Lambda \cap$	LITN	$\overline{\Box}$
		CHECKED HEAT_		(<u>RB</u>	1 [2	くヒリ	RAKIN	MAL	$\Box\Box\Box$	1
		TREAT FINISH SPEC		TITLE						
[USED ON MODEL	UNLESS OTHERWISE SPECIFIE DIMENSIONS ARE IN INCHES	D							
	?	TOLERANCES ON: DECIMALS .XXX ± .005 EDACTIONS + 1						-		
ł		XX ± .005 FRACTIONS ± 1 .XX ± .01 ANGLES ±.6		DWG 1	NO.		PART	#		REV.
f		UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES)				1 1 11 \ 1	11		
		.015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	3	SCALE		NTS	DATE 1-28-0	06 ^{sheet} :	1 of	1